

AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions, and listings, of claims in the application:

LISTING OF CLAIMS:

By 1. (Currently amended): Gripper provided with air chokes using vacuum suction, capable of transporting various material and objects, wherein said gripper ~~is made~~ consists of a modular structure, which ~~consists of~~ comprises a central profile section core whose dimension is fitted to the size of the piece to be transported, and ~~of~~ profile sections fitted in order to be affixed perpendicularly onto this central core, mechanisms for affixing these profile sections at the selected location, ~~ball and socket bearings~~ longitudinally extending supports mounted at the ends of these profile sections by ball and socket bearings, and air chokes that are affixed to the ends of the ~~ball joints and ball joints that~~ supports, so as to enable an angular clearance of the air chokes.

2. (Currently amended): Gripper according to claim 1, wherein the central core is profiled in ~~such a way so as to make it possible to laterally clamp suction pipes for the air chokes.~~

3. (Currently amended): Gripper according to claim 1, wherein the mechanisms for affixing the profile sections to the central core consist, for each profile section, of an angle bracket ~~and cooperating with~~ a small plate ~~that~~ to allow the profile sections to become ~~affixed~~ clamped to any position of the central core.

4. (Currently amended): Gripper according to claim 1, wherein each ~~air choke is supported by a ball joint mounted in a ball and socket bearing, giving the assembly a specified clearance, for~~

~~example, of 22 degrees support is longitudinally adjustable~~, thus making it possible to transport pieces having awkward shapes.

By 5. (Currently amended): Gripper according to claim 1, wherein the ~~air choke is supported by a combined ball joint mounted in a ball and socket bearing, giving the assembly an angular clearance of 30 degrees, and having~~ supports have different lengths that so as to serve as the extension pieces.

6. (Currently amended): Gripper according to claim 1, wherein the ~~air choke is supported by a piece in the shape of a ball joint whose axis is mounted with a spring, and~~ supports each comprise a rod which is slidable into a piece with a shape of a ball which is mounted in a ~~the~~ ball and socket bearing, ~~giving the assembly an angular clearance of 22 degrees and a spring is mounted between the rod and the piece with a shape of a ball.~~

7. (Currently amended): Gripper according to claim 1, wherein ~~said gripper consists of a ball and socket bearing fitted in order to mount the ball joints there and of ball joints that are fitted with springs as well as combined ball joints, thus making possible an angular clearance of approximately + 22 degrees in the two first cases, and of 30 degrees in the last case, where their attachment~~ the supports are attached onto the corresponding profile section ~~makes it possible to make the assembly slide until the desired position~~ so that they are slidably adjustable along the profile section.

8. (Currently amended): Gripper according to claim 1, wherein said gripper ~~consists of~~ comprises extension pieces and ~~combined ball joints~~ extended supports that ~~make it possible for enable~~ the air chokes ~~to be able~~ to suction by vacuum the pieces whose shapes or differences in height are sizeable.

9. (Currently amended): Gripper according to claim 1, wherein said gripper ~~consists of~~ comprises sloped shims that make it possible to increase the ~~angle~~ angular clearance by ~~15 degrees~~ in one case and 35 degrees in a second case a predetermined angle.

10. (Currently amended): Gripper according to claim 1, wherein said gripper is fitted in order to be affixed onto a robot or on a mechanized system by means of a manual interface, ~~fitted~~ in order to allow an effective clamping of the gripper with a large amount of rigidity.

By 11. (Currently amended): Gripper according to claim 1, wherein said gripper is adapted in order to be affixed onto a robot or on a mechanized system by automatic interfaces with a large amount of clamping rigidity.

12. (Currently amended): Gripper ~~according to claim 1~~ provided with air chokes using vacuum suction, capable of transporting various material and objects, wherein said gripper is made consists of a modular structure, which comprises a central profile section core whose dimension is fitted to the size of the piece to be transported, and of profile sections fitted in order to be affixed perpendicularly onto this central core, mechanisms for affixing these profile sections at the selected location, and air chokes that are affixed to the ends of the profile section by ball and socket bearings, so as to enable an angular clearance of the air chokes, wherein said gripper is mounted onto a crosspiece that is itself mounted either onto a robot or onto a mechanized system, and that accommodates three interfaces that make it possible to mount a gripper to the a center interface for small pieces to be transported, or to each end interfaces for the pieces that have large dimensions.
